

**PROCEDURE FOR CONSTRUCTION OF MULTI-LAYER CYLINDRICAL
CONTAINERS AND CONTAINERS SO OBTAINED**
DESCRIPTION

5 **OBJECT OF THE INVENTION**

The invention disclosed herein consists of a procedure for construction of multi-layer cylindrical containers and containers so obtained, of among the different containers on the market intended for the purpose of conservation and exhibition of individual products.

10 This invention is characterized in a special construction of the container, of multi-layer tubular constitution, the interior in sheet metal and the exterior in cylindrical lenticular thermoplastic material.

This invention is also characterized in a special construction of the cover of the container, in any geometric configuration thereof, as well as having a base both
15 flat and curved.

BACKGROUND OF THE INVENTION

The containers for conservation and exhibition of individual products add value to the latter and are excellent means of advertising the same.

20 These means of exhibition are built in the most diverse materials and forms and are based on erectable laminar pieces or on others with very diverse finishes.

Within the tubular elements, one starts with a curved metallic sheet with hooked ends, or a plastic sheet, welding it by the rims of its longest longitudinal sides.

Then the two opposing bases and the product inside the enclosure so built are
25 incorporated.

The applicant is unaware of the existence of multi-layer containers, metallic and of plastic material, of the characteristics of that disclosed herein.

DESCRIPTION OF THE INVENTION

30 The invention object of the present specification relates to a procedure for construction of multi-layer cylindrical containers and the obtained containers, the procedure of this invention being characterized in:

Cutting both sheets, the sheet of plastic material being slightly less in height, and, simultaneously, carrying out the recessing thereof in one of their corners,
35 this recessing being also dimensionally smaller in the sheet of plastic than in the

metallic one.

Superimposing the same, without adhesives.

Uniting their end sides and hooking them together, configuring with both sheets, the metallic one and that of plastic, with a tube.

- 5 Configuring a small flange, by rounding off the upper rim of the metallic sheet, covering the rim of that of plastic, with overlapping of one of the ends on the other one, in the area of the corner recess of both sheets.

Inserting the lower lip of the metallic sheet in the conventional internal stepped bottom of the container.

- 10 The flanging of the bottom, the introduction of the product and inserting the cover also conventional.

- This invention is likewise characterized in a special construction of the cover of the container, in any geometric configuration of the rim and of the skirt thereof, round, oval, polygonal or mixing straight segments with other curved ones, as
15 well as arranging the base thereof to be both flat or curved concavely or convexly.

- To such ends it has a special construction of the cover, both for the application thereof in cylindrical tubular or polyhedral containers, of laminar origin and for others of less height, conventional of stamped body and rim finished off by
20 roller, tampon or another known procedure of finishing rims, which hold secure both layers of sheets, previously conformed, appropriately superimposed and the layer of plastic being of slightly smaller dimensions than the metallic one in order to proceed, thereafter, to form a small flange edging the projecting segment of the metallic layer over the rim of the plastic layer.

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DESCRIPTION OF THE DRAWINGS

The present descriptive specification is completed with a set of drawings, which illustrate in a non-restrictive manner the preferred embodiment of the invention.

- Figure 1 is a plan of the over-mounting of the sheets and the corner cutting thereof.
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Figure 2 shows an elevation in section of a container of the invention, exploded to show bottom and cover.

Figure 3 is the container, once closed, with details of the finish of the small flange overlapping both sheets and of the flanging of the bottom.

- 35 Figure 4 shows the construction of the circular cover of the preferred

embodiment, as well as a detail of its finish.

Figure 5 shows its application to the tubular container of laminar origin, of the main patent, as well as to a stamped box for holding CDs.

5 **PREFERRED EMBODIMENT OF THE INVENTION**

In the light of that described above, the present invention relates to a container procedure for construction of multi-layer cylindrical containers and containers so obtained.

10 The same belongs to the group of the different containers on the market intended for the purpose of conservation and exhibition of individual products and, more particularly, to that of drinks of high unit price, although its application can extend to other products, including non-alimentary.

15 This invention is characterized in a special construction of the container, with conventional cover and bottom, as well as tubular multi-layer constitution, the interior in sheet metal and the exterior in cylindrical lenticular thermoplastic material.

To this end, one proceeds to cut both sheets in rectangular shapes, one of them, the interior sheet (1), in conventional metallic material, preferably of the same type as the cover and the bottom, which can be provided or not with
20 another metallic coating (1.1).

While the other sheet (2) is cut slightly smaller in height, the plastic material is double with an external layer (2.1) which presents an alignment of a multiplicity of cylindrical sectors (2.2) which constitute lenses which, depending on the viewing angle, reflect diverse images incorporated in the innermost plastic sub-
25 sheet (2.3).

One likewise proceeds, simultaneously with each of these sheets (1) and (2), to the respective cutting of recesses (1.2) and (2.4) of one of their corners, which subsequently must be in the upper vertical position. It must also be satisfied that this recessing is dimensionally smaller in height in the double sheet (2) of
30 plastic than in the metallic one (1).

The two sheets (1) and (2) are superimposed, without adhesives and, with simple appropriate tools, are mutually secured to each other.

Then their end sides are joined and hooked to each other conventionally, configuring a tube (3) with both sheets, the metallic one and that of plastic.

35 At the top, one proceeds thereafter to configure a flange (1.3), by rounding off

the rim of the metallic sheet (1), which covers the rim of that of plastic, so that one of the ends of the small flange overlaps the other, in the area of the corner recess of both sheets.

Thus the plastic sheet (2) is completely embedded, by its upper horizontal rim, inside the small flange (1.3) of the metallic sheet (1), except in the segment of the recess (2.4), which is flush with the lower rim of the small flange (1.3). Thus the overlapping of the flange (1.3) is uniform over the whole mouth of the tube (3), by not being superimposed on the bend of the hook of the plastic sheet (2). Of the lower vertical side, the lip (1.4) of the metallic sheet, resulting from the larger cut in the plastic sheet that is abutting against it, is that which is used for inserting the stepped (4.1) conventional internal bottom piece (4) of the container.

It is then sufficient to flange (4.2) the bottom to finish the same, introduce the product and insert a conventional cover (5).

Alternatively, when the body (6) need not have an excessive height it can be built by pressing, the same as the cover (7), by mounting previously stamped, formed and superimposed the plastic sheets (1) on the metallic sheet or sheets (2), the sheet or sheets (2) leaving a rim (8) projecting beyond the sheets (1) on all the periphery thereof, proceeding finally to form a small flange (9) edging the projecting rim (8) of the metallic sheet or sheets (2) over the rim of the plastic layer (1).

This pressed body (6), in different heights depending on the requirements and the pressing technique applied, is intended to hold both the aforementioned CDs and any other product, be this alimentary (cakes, sweets, biscuits, chocolates in compartmented trays, etc.) or garments (underwear, accessories and others) or any product of high unit value and capable of being packed.

Both the tube (3) and the equivalent body (6) are prepared with any geometric configuration of the rim and the skirt: round, oval, polygonal or mixing straight segments with other curved ones, as well as having the base thereof both in a flat form and curved concavely or convexly.

The essential nature of this invention is not altered by variations in materials, form, size and arrangement of the component elements, described in a non-restrictive manner, this being sufficient for an expert to proceed to the reproduction thereof.